CLAIMS

What is claimed is:

1. A method for improving network efficiency of document transmission from a content server to a user, comprising the steps of:

(a) at a condenser located between a content server and a user connected to said content server over a network:

(i) receiving a user's request for a document,

(ii) said requested document being referencable with respect to a base document associated with a class;

(b) automatically obtaining said class;

(c) automatically obtaining said base document associated with said class;

(d) creating a condensed document by abbreviating redundancy in said requested document relative to said base document; and

(e) transmitting said condensed document to said user to enable said user to reconstruct said requested document.

2. The method of claim 1 where said obtained class in said step (b) allows substantial optimization of an aspect of at least one of said steps (d) and (e).

3. The method of claim 2 where said optimized aspect is a size of said condensed document.

4. The method of claim 2 where said optimized aspect is the computational effort required to create said condensed document.

5. The method of claim 2 where said optimized aspect is a time of transmission of said condensed document to said user.

6. The method of claim 2 where said optimized aspect is the effort required by said user to perform said reconstruction.

7. The method of claim 1 where said step (b) of obtaining said class includes selecting said obtained class from a plurality of preexisting classes.

8. The method of claim 7 where said selecting of said class occurs in accordance with meeting a minimum acceptability threshold.

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9. The method of claim 7 where said selecting of said class occurs in accordance with meeting an optimization standard.

10. The method of claim 7 where said selected class minimizes the sum of differences between said selected class and others of said preexisting classes.

11. The method of claim 1 where said step (b) of obtaining said class includes creating a new class.

12. The method of claim 1 where said obtained base document in said step (c) allows a substantial optimization of an aspect of at least one of said steps (d) and (e).

13. The method of claim 1 where said base document exhibits an enhanced suitability to be a reference for multiple future document requests by virtue of being a function of many past document requests.

14. The method of claim 1 where said created base document includes a plurality of frequently requested components from documents associated with said obtained class.

15. The method of claim 1 further comprising the step of sending said base document to said user for use in said reconstruction.

16. The method of claim 1 wherein said base document for use in said reconstruction is preexisting at said user.

17. The method of claim 1 further comprising the step of replacing said base document with a new base document.

18. The method of claim 1 where said base document is substantially anonymous with respect to any user.

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19. The method of claim 1 where said base document substantially lacks content which is confidential to any particular user.

20. The method of claim 1 where said request includes identifiers of said user and said requested document.

21. The method of claim 20 where said document identifier includes a network location thereof.

22. The method of claim 1 where said base document has not necessarily been previously requested by said user.

23. A computer-readable storage medium encoded with processing instructions for implementing a method for improving network efficiency of document transmission from a content server to a user, said processing instructions for directing a computer to perform the steps of:

(a) (i) receiving a user's request for a document,

(ii) said requested document being referencable with respect to a base document associated with a class;

(b) automatically obtaining said class;

(c) automatically obtaining said base document associated with said class;

(d) creating a condensed document by abbreviating redundancy in said requested document relative to said base document; and

(e) transmitting said condensed document to said user to enable said user to reconstruct said requested document.

24. The computer-readable storage medium of claim 23 where said obtained class in said step (b) allows substantial optimization of an aspect of at least one of said steps (d) and (e).

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25. The computer-readable storage medium of claim 23 where said step (b) of obtaining said class includes selecting said obtained class from a plurality of preexisting classes.

26. The computer-readable storage medium of claim 23 where said step (b) of obtaining said class includes creating a new class.

27. The computer-readable storage medium of claim 23 where said obtained base document in said step (c) allows a substantial optimization of an aspect of at least one of said steps (d) and (e).

28. The computer-readable storage medium of claim 23 where said base document exhibits an enhanced suitability to be a reference for multiple future document requests by virtue of being a function of many past document requests.

29. The computer-readable storage medium of claim 23 where said created base document includes a plurality of frequently requested components from documents associated with said obtained class.

30. The computer-readable storage medium of claim 23 where said base document substantially lacks content which is confidential to any particular user.

31. The computer-readable storage medium of claim 23 where said base document has not necessarily been previously requested by said user.

32. A condenser located between, and configured to improve network efficiency of document transmission between, a content server and a user, comprising:

(a) an input interface configured to receive a request from a user for a document,

(i) said requested document being referencable with respect to a base document associated with a class;

(b) a class tracking module configured to automatically obtain said class;

(c) a document database configured to automatically obtain and provide said base document associated with said class;

(d) a condensation engine configured to create a condensed document by abbreviating redundancy in said requested document relative to said base document; and

(e) an output interface configured to transmit said condensed document to said user to enable said user to reconstruct said requested document.

33. The condenser of claim 32 deployed on the same network domain as said content server.

34. The condenser of claim 32 where said base document has not necessarily been previously requested by said user.

35. A system for efficient document transmission between a content server and a user, comprising: (a) the condenser of claim 32; and (b) at least one content server containing said requested document of claim 32.

36. A condenser for improving downstream network efficiency, said condenser comprising:

(1) a processor;

(2) a memory connected to said processor storing a program to control the operation of said processor;

(3) the processor operative with said program in said memory to:

(a) (i) receive a user's request for a document,

(ii) said requested document being referencable with respect to a base document associated with a class;

(b) automatically obtain said class;

(c) automatically obtain said base document associated with said class;

(d) create a condensed document by abbreviating redundancy in said requested document relative to said base document; and

(e) transmit said condensed document to said user to enable said user to reconstruct said requested document.

37. A method for preparing and transmitting a document from a content server to a user, comprising the steps of:

(a) receiving a request for a dynamic document to be sent to a user;

(b) obtaining an updated version of the requested document;

(c) searching a class database to determine whether the requested document can be a member of any of a plurality of current classes;

(d) determining at least one of said classes to serve as a reference for said requested document;

(e) extracting a base document associated with said reference class;

(f) generating a condensed document reflecting the difference between said requested document and said class base file by performing a delta-encoding process; and

(g) transmitting said condensed document to said requester.

38. The method of claim 37 where:

(i) it is determined in said step (c) that the requested document cannot be a member of any current class;

(ii) creating a new class based upon the requested document; and

(iii) storing the requested document in the class database as a base document for that class.

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39. The method of claim 37 where said base document has not necessarily been previously requested by said user.

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